

CLAIMS:

1. A method of determining the growth of trees comprising:
 - obtaining first measurement data at a first moment of time by utilizing a laser scanner located above the trees,
 - 5 obtaining second measurement data at a second moment of time by utilizing a laser scanner located above the trees,
 - processing said first measurement data in order to determine the location of tree locations,
 - processing said second measurement data in order to determine
 - 10 the location of tree locations,
 - determining the locations which are tree locations according to both said first and second processing results, and
 - calculating the growth of trees at said determined locations by determining the difference in the size indicated by the second measurement
 - 15 data as compared to the size indicated by said first measurement data.
2. A method according to claim 1, wherein said determining of the locations which are tree locations according to the results of both said first and second processing is carried out by tree-to-tree matching involving:
 - selecting a location which according to one of said first and second
 - 20 processing results is a tree location,
 - calculating the distance from said selected location to the closest location which according to the other one of said first and second processing results is a tree location, and
 - determining that the result of both said first and second processing
 - 25 indicates said selected location is a tree location, if the calculated distance does not exceed a predetermined minimum distance.
3. A method according to claim 1, comprising estimating the average growth of trees in a specific area based on average growth calculated based on the calculated growth at a plurality of tree locations.
- 30 4. A method according to claim 1, wherein average growth is calculated by:
 - comparing the growth at a plurality of tree locations with at least one predetermined threshold value in order to identify tree locations where the growth is such that an error can be suspected, and

calculating said average growth without taking into account the growth at said identified tree locations.

5 5. A method according to claim 1, wherein growth calculation is carried out by calculating the difference in profile of the trees as indicated by a plurality of measurement values obtained from a tree location, or by calculating the vertical or horizontal difference of the trees as indicated by the measurement data.

10 6. A computer program for controlling a computer to:
receive first three-dimensional measurement data,
receive second three-dimensional measurement data,
process said first measurement data in order to determine the location of tree locations,
process said second measurement data in order to determine the location of tree locations,
15 determine the locations which are tree locations according to the results of both said first and second processing,
calculate the growth at said determined locations by determining the difference in the size indicated by the second measurement data as compared to the size indicated by said first measurement data, and
20 produce a result indicating at least said calculated growth.

7. A computer program according to claim 6, wherein said computer program is configured to control a computer to calculate average growth by:

25 comparing the growth at a plurality of tree locations with at least one predetermined threshold value in order to identify tree locations where the growth is such that an error can be suspected, and

calculating said average growth without taking into account the growth at said identified tree locations.

30 8. An apparatus for determining the growth of trees, said apparatus comprising:

an input for receiving first three-dimensional measurement data and second three-dimensional measurement, and

processing means, said apparatus being arranged to:

35 process said first measurement data with said processing means in order to determine the location of tree locations,

process said second measurement data with said processing means in order to determine the location of tree locations,

determine the locations which are tree locations according to the results of both said first and second processing,

5 calculate the growth of trees at said determined locations with said processing means by determining the difference in the size indicated by the second measurement data as compared to the size indicated by said first measurement data, and

produce a result indicating at least said calculated growth.

10 9. An apparatus according to claim 8, wherein said apparatus is arranged to calculate average growth by:

comparing the growth at a plurality of tree locations with at least one predetermined threshold value in order to identify tree locations where the growth is such that an error can be suspected, and

15 calculating said average growth without taking into account the growth of at said identified tree locations.